RESPONSE AND REQUEST FOR RECONSIDERATION

Entry of the amendments and consideration of the remarks after final rejection is respectfully requested. It is believed that the amendments will place the application in condition for allowance or alternatively in better condition for appeal. It is also believed that consideration of the technical remarks will enable the application to be allowed. These remarks and amendments were not earlier submitted because their desirability was only made apparent by the Examiner's remarks in the outstanding office action.

The Applicants have amended claims 1, 17, 19, 20, and 27 to specify about 0.03 wt % to about 1 wt % of a condensation product of a fatty acid with an ethylenepoly-amine. Support for the percentage of the condensation product is provided in the specification on page 8, line 7 to 10 (paragraph [0036]). Accordingly, the amendment is fully supported by the application as filed. Thus the amendment does not add subject matter.

The Examiner has maintained the 35 U.S.C. 103 rejection to claims 1, 2, 7-20 27 and 28 as being unpatentable over Ward (WO00/70001).

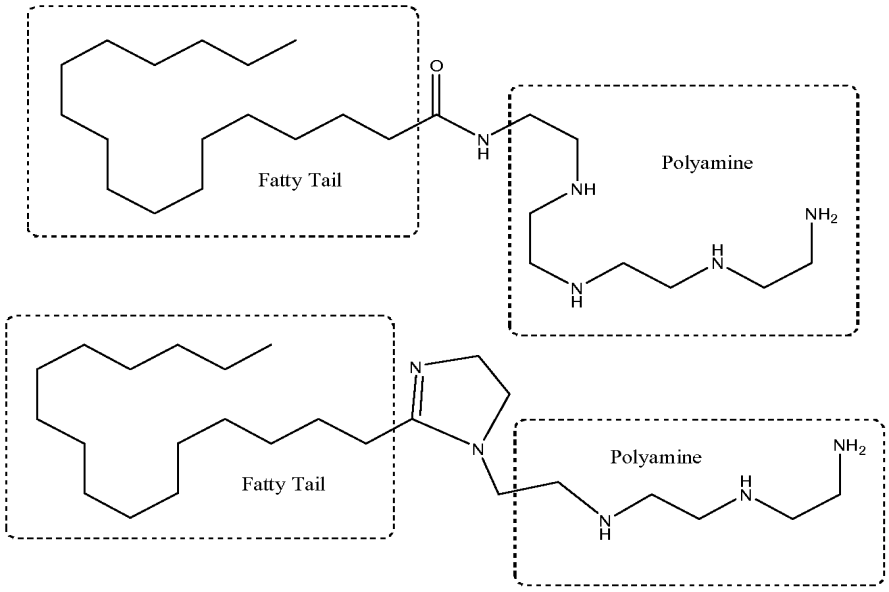
The Examiner considered the remarks filed on 10/10/2008, however, they were considered not persuasive. The reason given was that the data presented for this application was considered to be not commensurate with the scope of the claims, given that data is available for supposedly only one condensation product. Furthermore, the amount of the condensation product was considered to be not reasonably commensurate with the scope of the claims, given that the examples contain 0.20 wt % of the conden-sation product, whereas Claim 1 at that time did not have any limitation on the amount of the condensation product. A detailed discussion is presented below answering these concerns and demonstrating the reasons as to why the presently amended claims meet the requirements of 35 U.S.C. 103(a) in view of Ward.

<u>Condensation Product Entity</u>

The condensation product evaluated is a combination of an amide species and an imidazoline species. However, the present claims allow for either this combination or for the possibility of the amide species alone or the imidazoline species alone. The Applicants submit that the data presented previously is sufficient to demonstrate that the material tested within the definition of the condensation product is reasonably commen-surate with the scope of the presently amended claims.

In considering the performance of the condensation product, it is important to view the molecule as a whole. As is demonstrated by the enclosed Declaration by Dr. Vickerman, the condensation product contains three parts: a Fatty tail, a Connecting group, and a Polyamine head or polar portion. The figure below, taken from the Declaration, shows these parts for stearic acid + tetraethylenepentamine reaction products.

The functional performance of the condensation product is primarily believed to be due to the fatty group and polyamine group within the structures. In contrast the connecting group between these two groups is believed to have minimal contribution towards the performance. It can be seen in the figure below that both connecting groups are very similar, containing only two hetroatoms. The amide has one oxygen and one nitrogen in the amide moiety. The imidazoline has two nitrogen atoms in the imidazoline moiety. Furthermor,e both the amide and the imidazoline have their respective heteroatoms in the same respective oxidations states. As a result, the surface activity of these two moieties is very similar. Taking all of this into consideration it is evident that there are significant structural similarities between the amide species and the imidazoline species and as a result these two species would be expected to have similar performance. Dr. Vickerman's Declaration provides evidence that the difference between these two molecules is small.



In view of the reasoned statements above, it is therefore submitted that a person skilled in the art would have the expectation that the amide species alone, the imidazoline species alone, or the mixture of the amide species with the imidazoline species will produce substantially similar performance.

Condensation Product Formation

The connection between the fatty tail and polyamine is conveniently and cost effectively achieved on an industrial scale using a condensation reaction between the carboxylic acid form of the fatty portion and one or two of the amine's nitrogens. Also necessary on an industrial scale is the high conversion rate of fatty acid and polyamine to the condensation product, since it is difficult and expensive to remove these unreacted species from the condensation product. Unreacted fatty acid and unreacted polyamine in the friction modifier, even in small amounts, are believed to be detrimen-

tal to the performance of the final lubricant formulation. Imidazoline formation in this reaction is a consequence of trying to achieve complete conversion of the starting reactants to the product. It is possible to further process the friction modifier to eliminate the imidazoline. However, elimination of the imidazoline species from the condensation product described above would incur additional production complexity that a skilled person would have limited or no motivation to undertake due to the expected similar performance of the amide and imidazoline compounds as described above.

In view of the remarks above relating to the performance and formation of the condensation product, it is submitted that the definition of the condensation product in the claims presented herein (in particular independent claims 1, 19, 20 and 27) provides a technically reasonable breadth of coverage and are commensurate with the scope of the evidence submitted.

Amount of Condensation Product

As noted above, the claims of the present invention have been amended to specify that the condensation product is present at 0.03 wt % to 1 wt %. It is submitted that the claims as amended are now narrowed to be commensurate with the scope of the evidence presented previously. Specifically, the examples presented in the application as filed and the various declarations by Dr. Patterson, Mr. Sumiejski and Dr. Vickerman have 0.2 weight percent of the condensation product. The experimental data presented in the Declarations showed in particular the advantage of employing a 0.2 weight percent of the condensation product along with the other specified additives of the claimed invention. The amount of the condensation product as now claimed is representative because it more closely encompasses the examples which have been demonstrated to be effective. As a consequence the scope of the composition as defined by claims 1, 19, 20 and 27 provides a technically reasonable breadth of coverage.

For the foregoing reasons, it is submitted that all claims are novel and unobvious. Accordingly, an early and favorable reconsideration of the rejections made in the prior office actions is respectfully requested. It is believed that no additional fees are due in connection with this submission. However, any required fees or underpayment or overpayment of fees should be charged (or credited) to Deposit Account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

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Case 3218 USPTO Office action March 2009 dms final.doc

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